

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: Unknown)
Filing Date: Unknown)
Priority Date: 8 February 2001)
Applicants: FIELDING, Victor)
For: SELF COMPENSATING AMPLIFIER)
AND DRIVER FOR BROADCAST)
DATA RECEIVER)

PRELIMINARY AMENDMENT

Director For Patents
Box: New Application
Washington, D.C. 20231

Dear Sir:

This is a preliminary amendment to the enclosed application entitled "Self Compensating Amplifier and Driver for Broadcast Data Receiver" claiming priority to British Patent Application No. 0103082.4 filed 8 February 2001.

In the Specification:

Please amend the specification as follows:

Page 1, after the title, insert the following headers and paragraph:

--CROSS-REFERENCE TO RELATED APPLICATION

This application claims priority to British Patent Application No. 0103082.4 filed 8 February 2001.

BACKGROUND OF THE INVENTION-

Page 2, line 12 , change "eth" to --the--.

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Page 3, before line 5, insert the Header:

--SUMMARY OF THE INVENTION--

Page 3, line 10, change "characterised" to --characterized--.

Page 4, line 4, change "characterised" to --characterized--, before line 18 insert the following header:

--BRIEF DESCRIPTION OF THE DRAWING--

Page 4, before line 22, insert the following header:

--DESCRIPTION OF THE PREFERRED EMBODIMENTS--

Page 5, line 13, change "." to --,-- after the word "Thus".

Page 6, line 29, change "minimise" to --minimize--; after the last line, insert the following paragraph:

--While the invention has been described with a certain degree of particularity, it is manifest that many changes may be made in the details of construction and the arrangement of components without departing from the spirit and scope of this disclosure. It is understood that the invention is not limited to the embodiments set forth herein for purposes of exemplification, but is to be limited only by the scope of the attached claim or claims, including the full range of equivalency to which each element thereof is entitled.--

IN THE CLAIMS:

1. (Amended) A [B]roadcast [D]ata receiver apparatus [(BDR)] for receiving at least one signal carrying video data, said signal transmitted from a video data encoder, said signal having a voltage value within a known voltage range and said signal [is] required to pass through at least one amplifier in the processing of the same [and characterised in that the BDR is provided with]

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said apparatus comprising:

a video data amplifier and driver circuit which in operation is adaptable in response to changes in the environmental conditions in which [the BDR] said broadcast data receiver operates and compensates for said changes in the environmental conditions via [the] generation of a level of DC offset on an input transistor of the video data amplifier and driver circuit, said DC offset value added to the video data signal to form a combined signal.

2. (Amended) An [A]pparatus according to claim 1 [characterised in that the] wherein said environmental change relates to a change in temperature.

3. (Amended) An [A]pparatus according to claim [1 or] 2 [characterised in that the] wherein said change in environmental condition includes the change in level of amplification of [the] a bias voltage.

4. (Amended) An [A]pparatus according to claim 1 [characterised in that] wherein the compensation in the video data amplifier and driver circuit provides [a] said DC offset at the input transistor of a calculated compensatory value.

5. (Amended) An [A]pparatus according to claim 1 [characterised in that the] wherein said known voltage range of the video signal is 0V to 5V.

6. (Amended) An [A]pparatus according to claim 5 [characterised in that the] wherein said known voltage range of the video signal is 0 to 1V.

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7. (Amended) A method of processing a received video data signal by a broadcast data receiver[(BDR)], said method [including] comprising the steps of:

receiving the video signal having a voltage value within a known voltage range and [said signal is] being required to pass through at least one amplifier in the processing of the same; [and characterised in that the method includes]

passing the video signal through a video data amplifier and driver circuit which adapts the video signal as it passes therethrough with reference to the environmental conditions in which the [BDR] broadcast data receiver operates; [and]

said circuit generat[es]ing at least one compensatory value which alters with respect to changes in the environmental conditions; and

said at least one compensatory value being [which is] added to the video signal as the video signal passes through the said circuit to form a combined signal.

8. (Amended) A method according to claim 7 [characterised in that the] wherein said compensatory value is a level of DC offset added to the video data signal to form [the] said combined signal.

9. (Amended) A method according to claim 7 [characterised in that] wherein a video data signal multiplication factor is generated in the circuit and used to multiply [the] said combined signal as it passes through the circuit.

10. (New) An apparatus according to claim 1 wherein said change in environmental condition includes the change in level of amplification of a bias voltage.

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11. (New) A broadcast data receiver apparatus, said apparatus comprising:
 - receiving means for receiving at least one signal carrying video data and being transmitted from a video data encoder and having a voltage value within a known voltage range;
 - at least one amplifier wherein said signal is passed through during processing;
 - a video data amplifier and driver circuit having an input transistor and generating a level of DC offset on the input transistor in response to changes in the environmental conditions in which the broadcast data receiver operates and compensates for said changes in the environmental conditions; and
 - a combined signal which includes said DC offset value added to the video data signal.
12. (New) Apparatus according to claim 11 wherein said environmental change relates to a change in temperature.
13. (New) Apparatus according to claim 11 wherein said change in environmental condition includes the change in level of amplification of a bias voltage.
14. (New) Apparatus according to claim 13 wherein said change in environmental condition includes the change in level of amplification of a bias voltage.
15. (New) Apparatus according to claim 11 wherein said known voltage range of said video signal is 0V to 5V.
16. (New) Apparatus according to claim 11 wherein said known voltage range of the video is 0 to 1V.

REMARKS

Attached is the clean version of the claims and new paragraphs as required in Section 1.121(4) (ii).

The application should now be in condition for examination, which is respectfully requested.

Respectfully Submitted

HEAD, JOHNSON & KACHIGIAN

Dated: 7 February 2002

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New Headers to be Inserted on Page 1, before line 1:

CROSS-REFERENCE TO RELATED APPLICATION

This application claims priority to British Patent Application No. 0103082.4 filed 08 February 2001.

BACKGROUND OF THE INVENTION

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Replacement Paragraph to be Inserted in Page 2:

In practise, it is found that the introduction of the DC offset means that any offset voltage is amplified by the gain value of the amplifier and hence appears as an amplified DC offset on the output of the same which is undesirable. Furthermore, the operating temperature of these components can change through time and use and said changes can influence and be influenced by the particular operating environment in which the BDR is located and over which the BDR manufacturer has little or no control other than being able to provide to the user general usage advice and hope that the user adheres to the advice. Thus, in practice any temperature change effects tend to be amplified, and appear as a further DC offset on the output of the amplifier which again is a problem in the operation of the video data amplifier and driver circuit in terms of possible malfunction and incorrect processing of the received video data which in turn can lead to the video display for the user being incorrect.

SUMMARY OF THE INVENTION

In a first aspect of the invention, there is provided a Broadcast Data receiver apparatus (BDR) for receiving at least one signal carrying video data, said signal transmitted from a video data encoder, said signal having a voltage value within a known voltage range and said signal is required to pass through at least one amplifier in the processing of the same and characterized in that the BDR is provided with a video data amplifier and driver circuit which in operation is adaptable in response to changes in the environmental conditions in which the BDR operates and compensates for said changes in the environmental conditions via the generation of a level of DC offset on an input transistor of the video data amplifier and driver circuit, said DC offset value added to the video data signal to form a combined signal.

Replacement Paragraph and Headers to be Inserted into Page 4

DESCRIPTION OF THE DRAWING

DESCRIPTION OF THE PREFERRED EMBODIMENTS

receiver(BDR), said method including receiving the video signal having a voltage value within a known voltage range and said signal is required to pass through at least one amplifier in the processing of the same and characterized in that the method includes passing the video signal through a video data amplifier and driver circuit which adapts the video signal as it passes therethrough with reference to the environmental conditions in which the BDR operates and said circuit generates at least one compensatory value which alters with respect to changes in the environmental conditions and which is added to the video signal as the video signal passes through the said circuit to form a combined signal.

Replacement Paragraph to be Inserted into Page 5

Thus, in practise, and in accordance with the invention, as resistor R3 = resistor R4 then any change in the transistor Q1A voltage drop (V_{be}) value due to environmental changes, for instance, is passed onto resistor R3 to compensate for changes in the voltage drop (V_{be}) at transistor Q1B.

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Replacement Paragraph to be Inserted into Page 6

The provision of the self compensating circuit allows relatively simple video amplifiers to be used and the problems conventionally associated with such use to be overcome so that changes in the operation of the same which can be caused by environmental alterations affect the operation of the circuit in a positive manner to alter the compensatory value to be added to the video signal and hence cancel or minimize the adverse effect on the video signal itself.

New Paragraph for Page 6 to be Inserted After the Last Line:

While the invention has been described with a certain degree of particularity, it is manifest that many changes may be made in the details of construction and the arrangement of components without departing from the spirit and scope of this disclosure. It is understood that the invention is not limited to the embodiments set forth herein for purposes of exemplification, but is to be limited only by the scope of the attached claim or claims, including the full range of equivalency to which each element thereof is entitled.

Clean Version of the Claims

1. (Amended) A broadcast data receiver apparatus for receiving at least one signal carrying video data, said signal transmitted from a video data encoder, said signal having a voltage value within a known voltage range and said signal required to pass through at least one amplifier in the processing of the same said apparatus comprising:

a video data amplifier and driver circuit which in operation is adaptable in response to changes in the environmental conditions in which said broadcast data receiver operates and compensates for said changes in the environmental conditions via generation of a level of DC offset on an input transistor of the video data amplifier and driver circuit, said DC offset value added to the video data signal to form a combined signal.

2. (Amended) An apparatus according to claim 1 wherein said environmental change relates to a change in temperature.

3. (Amended) An apparatus according to claim 2 wherein said change in environmental condition includes the change in level of amplification of a bias voltage.

4. (Amended) An apparatus according to claim 1 wherein the compensation in the video data amplifier and driver circuit provides said DC offset at the input transistor of a calculated compensatory value.

5. (Amended) An apparatus according to claim 1 wherein said known voltage range of the video signal is 0V to 5V.

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6. (Amended) An apparatus according to claim 5 wherein said known voltage range of the video signal is 0 to 1V.

7. (Amended) A method of processing a received video data signal by a broadcast data receiver, said method comprising the steps of:

receiving the video signal having a voltage value within a known voltage range and being required to pass through at least one amplifier in the processing of the same;

passing the video signal through a video data amplifier and driver circuit which adapts the video signal as it passes therethrough with reference to the environmental conditions in which the broadcast data receiver operates;

said circuit generating at least one compensatory value which alters with respect to changes in the environmental conditions; and

said at least one compensatory value being added to the video signal as the video signal passes through the said circuit to form a combined signal.

8. (Amended) A method according to claim 7 wherein said compensatory value is a level of DC offset added to the video data signal to form said combined signal.

9. (Amended) A method according to claim 7 wherein a video data signal multiplication factor is generated in the circuit and used to multiply said combined signal as it passes through the circuit.

10. (New) An apparatus according to claim 1 wherein said change in environmental condition includes the change in level of amplification of a bias voltage.

11. (New) A broadcast data receiver apparatus, said apparatus comprising:
receiving means for receiving at least one signal carrying video data and being transmitted from a video data encoder and having a voltage value within a known voltage range;

at least one amplifier wherein said signal is passed through during processing;

a video data amplifier and driver circuit having an input transistor and generating a level of DC offset on the input transistor in response to changes in the environmental conditions in which the broadcast data receiver operates and compensates for said changes in the environmental conditions; and

a combined signal which includes said DC offset value added to the video data signal.

12 (New) Apparatus according to claim 11 wherein said environmental change relates to a change in temperature.

13. (New) Apparatus according to claim 11 wherein said change in environmental condition includes the change in level of amplification of a bias voltage.

14. (New) Apparatus according to claim 13 wherein said change in environmental condition includes the change in level of amplification of a bias voltage.

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15 (New) Apparatus according to claim 11 wherein said known voltage range of said video signal is 0V to 5V.

16. (New) Apparatus according to claim 11 wherein said known voltage range of the video is 0 to 1V.

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